1993

# Nebraska Summary: S145 Case-IH 5250

Nebraska Tractor Test Laboratory
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# SUMMARY OF OECD TEST 1462—NEBRASKA SUMMARY 145
# CASE INTERNATIONAL 5250 DIESEL
# 16 SPEED

## POWER TAKE-OFF PERFORMANCE

| Power HP (kW) | Crank shaft speed rpm | Gal/hr *(l/h)* | lb/hp.hr *(kg/kW.h)* | Hp.hr/gal *(kW.h/l)* | Mean Atmospheric Conditions |
|---|---|---|---|---|---|
| **MAXIMUM POWER AND FUEL CONSUMPTION** | | | | | |
| **Rated Engine Speed (PTO speed—996 rpm)** | | | | | |
| 112.2 *(83.7)* | 2200 | 6.86 *(25.97)* | 0.422 *(0.257)* | 16.36 *(3.22)* | |
| **Maximum Power (2 hours)** | | | | | |
| 115.6 *(86.2)* | 2000 | 6.80 *(25.72)* | 0.406 *(0.247)* | 17.00 *(3.35)* | |
| **VARYING POWER AND FUEL CONSUMPTION** | | | | | |
| 112.2 *(83.7)* | 2200 | 6.86 *(25.97)* | 0.422 *(0.257)* | 16.36 *(3.22)* | Air temperature |
| 97.8 *(72.9)* | 2256 | 6.17 *(23.37)* | 0.436 *(0.265)* | 15.84 *(3.12)* | 68°F *(20°C)* |
| 74.6 *(55.6)* | 2295 | 5.12 *(19.40)* | 0.473 *(0.288)* | 14.57 *(2.87)* | Relative humidity |
| 50.2 *(37.4)* | 2313 | 4.09 *(15.48)* | 0.562 *(0.342)* | 12.28 *(2.42)* | 35% |
| 25.2 *(18.8)* | 2325 | 3.06 *(11.60)* | 0.840 *(0.511)* | 8.22 *(1.62)* | Barometer |
| ..... ..... | 2349 | 2.25 *(8.51)* | ..... ..... | ..... ..... | 29.8" Hg *(101.0 kPa)* |

Maximum Torque 365 lb.-ft. *(496 Nm)* at 1199 rpm
Maximum Torque Rise 36.6%
Torque rise at 1800 engine rpm 22%

## DRAWBAR PERFORMANCE
### FUEL CONSUMPTION CHARACTERISTICS

| Power Hp *(kW)* | Drawbar pull lbs *(kN)* | Speed mph *(km/h)* | Crank-shaft speed rpm | Slip % | Fuel Consumption lb/hp.hr *(kg/kW.h)* | Fuel Consumption Hp.hr/gal *(kW.h/l)* | Temp.°F (°C) cool-ing med | Temp.°F (°C) Air dry bulb | Barom. inch Hg *(kPa)* |
|---|---|---|---|---|---|---|---|---|---|
| **75% of Pull at Maximum Power—Five Hours 6th (2 II) Gear** | | | | | | | | | |
| 79.7 *(59.4)* | 8715 *(38.77)* | 3.43 *(5.52)* | 2276 | 2.4 | 0.498 *(0.303)* | 13.86 *(2.73)* | 178 *(81)* | 39 *(4)* | 30.0 *(101.6)* |
| **MAXIMUM POWER IN SELECTED GEARS** | | | | | | | | | |
| 4th (4 I) Gear | | | | | | | | | |
| 91.3 *(68.1)* | 18295 *(81.39)* | 1.87 *(3.02)* | 2129 | 15.0 | 0.492 *(0.299)* | 14.01 *(2.76)* | 180 *(82)* | 30 *(–1)* | 30.1 *(102.0)* |
| 5th (1 II) Gear | | | | | | | | | |
| 100.4 *(74.9)* | 15830 *(70.41)* | 2.38 *(3.83)* | 2000 | 7.1 | 0.469 *(0.285)* | 14.72 *(2.90)* | 180 *(82)* | 30 *(–1)* | 30.1 *(102.0)* |
| 6th (2 II) Gear | | | | | | | | | |
| 103.4 *(77.1)* | 13160 *(58.53)* | 2.95 *(4.74)* | 2002 | 4.7 | 0.455 *(0.277)* | 15.18 *(2.99)* | 181 *(83)* | 32 *(0)* | 30.1 *(102.0)* |
| 7th (3 II) Gear | | | | | | | | | |
| 104.5 *(77.9)* | 10610 *(47.19)* | 3.69 *(5.94)* | 2000 | 3.2 | 0.452 *(0.275)* | 15.28 *(3.01)* | 181 *(83)* | 32 *(0)* | 30.1 *(102.0)* |
| 8th (1 III) Gear | | | | | | | | | |
| 104.1 *(77.6)* | 9550 *(42.47)* | 4.09 *(6.58)* | 2000 | 2.7 | 0.452 *(0.275)* | 15.23 *(3.00)* | 181 *(83)* | 32 *(0)* | 30.1 *(102.0)* |
| 9th (4 II) Gear | | | | | | | | | |
| 104.3 *(77.8)* | 8475 *(37.69)* | 4.62 *(7.43)* | 2000 | 2.2 | 0.452 *(0.275)* | 15.23 *(3.00)* | 181 *(83)* | 32 *(0)* | 30.1 *(102.0)* |
| 10th (2 III) Gear | | | | | | | | | |
| 103.7 *(77.3)* | 7850 *(34.92)* | 4.95 *(7.97)* | 2000 | 2.1 | 0.457 *(0.278)* | 15.08 *(2.97)* | 180 *(82)* | 32 *(0)* | 30.1 *(102.0)* |
| 11th (3 III) Gear | | | | | | | | | |
| 101.4 *(75.6)* | 6165 *(27.42)* | 6.17 *(9.92)* | 2002 | 1.5 | 0.467 *(0.284)* | 14.77 *(2.91)* | 180 *(82)* | 30 *(–1)* | 30.1 *(102.0)* |

**Location of Test:** DLG Testing Station for Agricultural Equipment, Max-Eyth-Weg 1, D-64823 Gros Umstadt, Germany

**Dates of Test:** January to March, 1993

**Manufacturer:** J.I. Case Gmbh D-41460 Neuss, Germany

**FUEL OIL and TIME: Fuel** No. 2 Diesel **Cetane No.** NA **Specific gravity converted to 60°/60° F** ***(15°/15°C)*** 0.829 **Fuel weight** 6.92 lbs/gal *(0.827 kg/l)* **Oil SAE** 15W-40 **API service classification** CE **Oil consumption for 10 hours** 0.35 lb *(160 gm)* **Transmission and hydraulic lubricant** Case Hytran-Plus fluid **Front axle lubricant** SAE 85W/140

**ENGINE: Make** Case Diesel **Type** six cylinder vertical with turbocharger **Serial No.** 521 201 52 **Crankshaft** lengthwise **Rated rpm** 2200 **Bore and stroke** 4.016" × 4.724" *(102 mm × 120 mm)* **Compression ratio** 17.5 to 1 **Displacement** 359 cu in *(5883 ml)* **Starting system** 12 volt **Lubrication** pressure **Air cleaner** two paper elements **Oil filter** one full flow cartridge **Oil cooler** engine coolant heat exchanger for crankcase oil, radiator for hydraulic and transmission oil **Fuel filter** one paper element **Muffler** underhood **Exhaust** vertical **Cooling medium temperature control** thermostat

**CHASSIS: Type** front wheel assist **Serial No.** JJF 101 9805 **Tread width** rear 60.2" *(1530 mm)* to 87.8" *(2230 mm)* front 60.2" *(1530 mm)* to 87.8" *(2230 mm)* **Wheel base** 101.8" *(2585 mm)* **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio with partial (4) range operator controlled powershift **Nominal travel speeds mph *(km/h)*** first 1.24 *(2.00)* second 1.50 *(2.41)* third 1.85 *(2.98)* fourth 2.29 *(3.69)* fifth 2.83 *(4.56)* sixth 3.41 *(5.49)* seventh 4.22 *(6.79)* eighth 4.66 *(7.50)* ninth 5.23 *(8.41)* tenth 5.61 *(9.03)* eleventh 6.93 *(11.16)* twelfth 8.59 *(13.82)* thirteenth 10.18 *(16.38)* fourteenth 12.26 *(19.73)* fifteenth 15.16 *(24.39)* sixteenth 18.77 *(30.21)* reverse 1.52 *(2.44)*, 1.83 *(2.94)*, 2.26 *(3.63)*, 2.80 *(4.50)*, 3.46 *(5.57)*, 4.16 *(6.70)*, 5.15 *(8.28)*, 5.69 *(9.15)*, 6.38 *(10.26)*, 6.85 *(11.02)*, 8.46 *(13.62)*, 10.48 *(16.87)* **Clutch** wet multiple disc hydraulically operated by foot pedal **Brakes** wet multiple disc hydraulically operated by two foot pedals which can be locked together **Steering** hydrostatic **Power take-off** 540 rpm at 2163 engine rpm or 1000 rpm at 2209 rpm **Unladen tractor mass** 11025 lb *(5000 kg)*

**REPAIRS AND ADJUSTMENTS:** No repairs or adjustments

| TRACTOR SOUND LEVEL WITH CAB | Front Wheel Drive Disengaged dB(A) | Front Wheel Drive Engaged dB(A) |
|---|---|---|
| Maximum Sound level in 8th (1 III) Gear | 80.0 | 80.0 |
| Bystander in 16th (4 IV) Gear | 87.5 | .... |

**REMARKS:** All test results were determined from observed data obtained in accordance with official OECD test procedures. This tractor did not meet manufacturers 3 point lift capacity claim of 7700 lbs *(3493 kg)* or hydraulic pump flow of 20.1 gpm *(76.1 l/m)*. The performance results on this summary were taken from OECD tests conducted under the Code I Standard Test Code procedure.

We, the undersigned, certify that this is a true summary of data from OECD Report No. **1462**, Nebraska Summary 145, January 5, 1994.

LOUIS I. LEVITICUS
Engineer-in-Charge

L.L. BASHFORD
R.D. GRISSO
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Board of Tractor Test Engineers

## CENTER OF GRAVITY

| | |
|---|---|
| Horizontal distance forward from centerline of rear wheels | 37.6 in *(955 mm)* |
| Vertical distanc above roadway | 37.9 in *(963 mm)* |
| Horizontal distance form center of rear wheel tread | 0.5 in *(12 mm)* to the right |

## TURNING ON A CONCRETE SURFACE

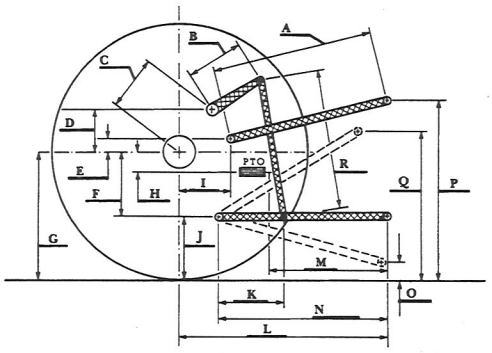
Turning radius—with brake applied right 157" *(4.00 mm)* left 157" *(4.00 mm)*
without brake right 172" *(4.37 mm)* left 172" *(4.37 mm)*
Turning space radius—with brake applied right 169" *(4.30 mm)* left 169" *(4.30 mm)*
without brake right 184" *(4.67 mm)* left 184 " *(4.67 mm)*

| TIRES, BALLAST AND WEIGHT | | With Ballast | Without Ballast |
|---|---|---|---|
| **Rear Tires** | --No., size, ply & psi *(kPa)* | Two 18.4R38; **;14 *(100)* | Two 18.4R38; **; 12 *(80)* |
| **Ballast** | --Liquid (total) | 1475 lb *(670 kg)* | None |
| | --Cast iron (total) | 670 lb *(305 kg)* | None |
| **Front Tires** | --No., size, ply & psi *(kPa)* | Two 14.9-24; 8; 23 *(160)* | Two 14.9-24; 8; 12 *(80)* |
| **Ballast** | --Liquid (total) | 785 lb *(355 kg)* | None |
| | --Cast Iron (total) | 1885 lb *(855 kg)* | None |
| **Height of Drawbar** | | 16.4 in *(416 mm)* | 16.5 in *(420 mm)* |
| **Static Weight with Operator** | --Rear | 9170 lb *(4160 kg)* | 7055 lb *(3200 kg)* |
| | --Front | 6835 lb *(3100 kg)* | 4135 lb *(1875 kg)* |
| | --Total | 16005 lb *(7260 kg)* | 11190 lb *(5075 kg)* |

## THREE POINT HITCH PERFORMANCE (OECD Static Test)

CATEGORY: II
Quick Attach: None

| | | |
|---|---|---|
| Maximum Force Exerted Through Whole Range: | 6990 lbs | *(31.1 kN)* |
| i) Opening pressure of relief valve: | NA | |
| Sustained pressure of the open relief valve: | 2800 psi | *(193 bar)* |
| ii) Pump delivery rate at minimum pressure: | 19.8 GPM | *(75.0 l/min)* |
| iii) Pump delivery rate at maximum hydraulic power: | 16.8 GPM | *(63.6 l/min)* |
| Delivery pressure: | 2395 psi | *(165 bar)* |
| Power: | 23.5 HP | *(17.5 kW)* |




**HITCH DIMENSIONS AS TESTED—NO LOAD**

| | inch | *mm* |
|---|---|---|
| A | 30.9 | *785* |
| B | 9.1 | *230* |
| C | 11.9 | *303* |
| D | 7.1 | *181* |
| E | 6.3 | *160* |
| F | 9.7 | *246* |
| G | 32.3 | *820* |
| H | 3.7 | *95* |
| I | 14.1 | *359* |
| J | 22.6 | *574* |
| K | 21.9 | *555* |
| L | 43.6 | *1108* |
| M | 22.0 | *558* |
| N | 34.5 | *877* |
| O | 8.9 | *225* |
| P | 46.6 | *1184* |
| Q | 37.0 | *940* |
| R | 25.2 | *640* |

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